



# Santa Clara Fire Department

## Installation and Modifications of Underground Storage Tanks at Fuel Dispensing Stations



## PURPOSE

To facilitate the design, installation, and plan review of Underground Storage Tanks (USTs) and to ensure that their installation complies with all applicable standards. All installations and modifications shall comply with the 2007 California Fire Code (CFC), 2007 California Building Code (CBC), Chapter 6.7 of the California Health and Safety Code (H&SC) and Title 23, Chapter 16 of the California Code of Regulations (CCR).

## SCOPE

The Santa Clara Fire Department (SCFD) has established the following requirements for the installation and modification of USTs and associated equipment at motor vehicle fuel dispensing stations. Plans not conforming to these minimum requirements will be returned for correction.

This guideline applies to all new installations and to all modifications to existing underground tanks at fuel dispensing stations. This guideline contains requirements for:

- A. Installation of new USTs.
- B. Modifications or upgrades to existing USTs.

## SUBMITTAL REQUIREMENTS

### 1. PERMITS:

CFC permits are required for the following:

- A. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used. *CFC 3401.4*
- B. To install, alter, remove, abandon, or otherwise dispose of a flammable or combustible liquid tank. *CFC 3401.4*
- C. To change the type of contents stored in a flammable or combustible liquid tank to a material which poses a greater hazard than that for which the tank was designed and constructed. *CFC 3401.4*
- D. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments. *CFC 2201.2*

### 2. GENERAL PLAN REQUIREMENTS:

- A. Provide two sets of plans.
- B. Specify a clear scope of work on the coversheet of the plan.
- C. Specify the legal address on the coversheet of the plan.
- D. Plan shall contain an equipment list that identifies all equipment to be installed. The equipment list shall specify the equipment, model number, location reference, and UL listing.
- E. Provide the manufacturers' specification sheets for the following items; Highlight the style, type, model, etc., and the UL listing for each piece of equipment: Piping, Tanks, Hoses, Electrical Equipment, Valves, Dispensers, Joints, Controls, Hose Nozzles, Flame Arresters, Valves, Vapor Pumps, Submersible or Subsurface Pumps, Equipment in vapor processing systems and Fire Checks or systems for prevention of flame.
- F. If existing equipment is shown on the plans for clarity, label the existing equipment as such.
- G. Plans shall be scaled to a national recognized standard.

- H. Plans shall contain verbatim notes outlined in Section 13.
- I. The contractor classifications for an Underground Storage Tank Permit are as follows:
  - i. A Class A General Engineering contractor is appropriate to install and/or remove underground storage tanks for any purpose whatsoever at any location.
  - ii. A C-36 Plumbing Contractor is appropriate to install and/or remove any underground storage tank that provides a service to a building. This includes storage tanks for service stations.
  - iii. A C-61/D-40 Limited Specialty Service Station Equipment Contractor is appropriate to install and/or remove underground fuel storage tanks with a capacity of up to 20,000 gallons at service stations or any other site.
  - iv. A Class B General Building Contractor is appropriate to install and/or remove an underground storage tank only if such work is performed within the meaning of B&P section 7057, the definition of a General Building Contractor.
- J. Submit appropriate fees: \$850 per tank.

### 3. SITE PLAN REQUIREMENTS:

The following information shall be specified on a scaled site plan:

- A. Location of underground storage tanks. Flammable and combustible liquid storage tanks located underground, either outside or under buildings, shall be in accordance with the following:
  - i. Tanks shall be located with respect to existing foundations and supports such that the loads carried by the latter cannot be transmitted to the tank.
  - ii. The distance from any part of a tank storing liquids to the nearest wall of a basement, pit cellar, or property line shall not be less than three feet.
  - iii. A minimum distance of one foot, shell to shell, shall be maintained between underground tanks. *CFC 3404.2.11.2*
  - iv. Maximum holding capacity of each tank in gallons.
  - v. Chemical name and hazard classifications of the stored product as defined in the CFC.
  - vi. Location of fire hydrants.
  - vii. Property lines.
  - viii. Buildings and all building openings within 30 feet of the proposed UST.
  - ix. Location of emergency shutdown devices. Emergency shutdown devices shall be provided for all fuel dispensers. Emergency shutdown devices for exterior fuel dispensers shall be located within 100 feet of, but not less than 20 feet from, dispensers. *CFC 2203.2*
  - x. Location of dispensers. Dispensing devices shall be located as follows:
    - a. Ten feet or more from property lines.
    - b. Ten feet or more from buildings having combustible exterior wall surfaces or buildings having noncombustible exterior wall surfaces that are not part of a one-hour fire resistive assembly, except canopies constructed in accordance with the CBC.
    - c. Such that all portions of the vehicle being fueled will be on the premises of the motor vehicle fuel dispensing station.
    - d. Such that the nozzle, when the hose is fully extended, will not reach within five feet of building openings.
    - e. Such that the nozzle, when the hose is fully extended, will be 20 feet or more from fixed sources of ignition. *CFC 2203.1*
    - f. Method of preventing spills from flowing into buildings, sidewalks, streets, storm drains, sewers. Acceptable methods include grading driveways or raising doorsills. *CFC 2205.3*
    - g. Where dispensing devices are mounted on grade, they shall be protected at each end with a minimum of two concrete filled steel posts, 6 inches (152 mm) in diameter, having a minimum 3 foot (924 mm) deep footing not less than 15 inches (329 mm) in diameter and projecting above grade at a minimum of 3 feet (914 mm) and be located not less than 4 feet (1229 mm) nor more than 5 feet

(1524 mm) from fuel dispensers or point of sale devices, or equivalent means approved by the chief. *CFC 2203.1.1*

- h. Location and rating of fire extinguisher. A fire extinguisher with a minimum rating of 2A:20B:C shall be provided and located such that it is not more than 75 feet from any pump, dispenser, or fill pipe opening. *CFC 2205.5*

#### **4. Installer Requirements**

- A. Installing contractor shall be a California licensed contractor possessing either an "A," "B," "C-36," or "C-61/D-40" license. (23 CCR 2715(g), LG 48-5)
- B. All installers working on the site must either possess or work directly under the supervision of someone on-site that possesses a current International Code Council (ICC) UST Installation/Retrofitting certificate. (23 CCR 2715(h)(2))
- C. All installers working on the site must either possess or work directly under the supervision of someone on-site that possesses a current manufacturer's training certificate for every system component. (23 CCR 2715(h)(1))

#### **5. TANK INFORMATION, SURFACE COVER, AND LOCATION:**

- A. The design, fabrication and construction of tanks shall comply with NFPA 30. Each tank shall bear a permanent nameplate or marking indicating the standard used as the basis for design. *CFC 3404.2.7*
- B. Provide documentation that the equipment is "listed" and/or approved for its particular use including tank(s), piping, pumps, overfill prevention system, over spill containment system, swiveling fill pipe adapters, swiveling, monitoring systems, leak sensors, tank gauges, and other devices. (23 CCR 2643(f), LG-113))
- C. Underground tanks shall not contain petroleum products containing mixtures of a non-petroleum nature, such as ethanol or methanol blends, without evidence of compatibility. *CFC 3404.2.11.1*
- D. Excavation for underground storage tanks shall be made with due care to avoid undermining the foundations of existing structures. Underground tanks shall be set on firm foundations and surrounded with at least 6 inches (152 mm) of non-corrosive inert material, such as clean sand. *CFC 3404.2.11.3*
- E. Where a tank is located in an area where it is subject to buoyancy because of a rise in the water table, flooding or accumulation of water from fire suppression operations, uplift protection shall be provided in accordance with Sections 4.3.2.6 and 4.3.3.5 of NFPA 30. *CFC 3404.2.7.8*

#### **6. FILLING AND DISPENSING OPERATIONS:**

- A. Openings for manual gauging, if independent of the fill pipe, shall be provided with a liquid tight cap or cover. Covers shall be kept closed when not gauging. If inside a building, such openings shall be protected against liquid overflow and possible vapor release by means of a spring loaded check valve or other approved device. *CFC 3404.2.7.5.4*
- B. Specify the location of the fill pipe and discharge line openings. Fill pipe and discharge lines shall enter tanks only through the top. Fill lines shall be sloped toward the tank. Underground tanks for Class I liquids having a capacity of more than 1,000 gallons shall be equipped with a tight fill device for connecting the fill hose to the tank. *CFC 3404.2.7.5.5.2*
- C. A spill container having a capacity of not less than 5 gallons (19L) shall be provided for each fill connection. For tanks with a top fill connection, spill containers shall be non-combustible and shall be fixed to the tank and equipped with a primary drain valve that drains into the primary tank. For tanks with a remote fill connection, a portable spill container shall be allowed. *CFC 3404.2.9.6.8*
- D. Each tank fill pipe opening must be equipped with one of the following overfill prevention equipment:
  - i. An audible or visual alarm, or flow restriction, shall alert the person filling the tank when the tank reaches 90% capacity, or
  - ii. Restrict flow to the tank at least 30 minutes before the tank overfills. Restriction must occur when the tank is no more than 95% full and must activate an audible alarm at least 5 minutes before the tank overfills, or

- iii. Provide positive shut off of flow to the tank before fittings on the top of the tank are exposed to product, or
- iv. The system shall automatically shut off the flow of fuel when the tank reaches 95% capacity. (23 CCR 2635 (b)(2))

## **7. FUEL DISPENSERS:**

Fuel dispensers shall comply with the following:

- A. Class I and II liquids shall be transferred from underground tanks by means of fixed, listed/approval pumps designed and equipped to allow control of the flow and to prevent leakage or accidental discharge. *CFC 2206.7.2*
- B. Dispensers shall not be secured to the island using piping or conduit. *CFC 2206.7.3*
- C. Class I and II liquids shall be transferred from tanks by means of fixed pumps designed and equipped to allow control of the flow and prevent leakage or accidental discharge. *CFC 2206.7.2*
- D. A listed automatic closing type hose nozzle valve with or without a latch open device shall be provided on island type dispensers used for dispensing Class I, II or III-A liquids. Over head type dispensing units shall be provided with a listed automatic closing type hose nozzle valve without a latch open device. *CFC 2206.7.6*

## **8. CONTAINMENT, LEAK DETECTION, MONITORING, AND CORROSION PROTECTION:**

The containment, leak detection, monitoring, and corrosion protection systems shall comply with the following (demonstration of compliance with each requirement is necessary during the plan review phase):

- A. Where the maximum allowable quantity per control area is exceeded, and when required by Section 2704.2, rooms, buildings, or areas used for storage, dispensing, use, mixing, or handling of Class I, II, and III-A liquids shall be provided with spill control and secondary containment in accordance with Section 2704.2. *CFC 3403.4*
- B. Underground storage tank systems shall be provided with an approved method of detecting leaks from any component of the system that is designed and installed in accordance with NFPA 30. *CFC 3404.2.11.5.2*
- C. The interstitial space of the underground tank shall be maintained under constant pressure (including brine) or vacuum to detect a breach in the primary or secondary containment systems prior to allowing liquid or vapor phase material to escape into the environment. (H&SC 25290.1(e))
- D. Where remote pumps are used to supply fuel dispensers, each pump shall have installed on the discharge side a listed leak detection device that will detect a leak in the piping and dispensers and provide an indication. A leak detection device is not required if the piping from the pump discharge to under the dispenser is above ground and visible. *CFC 2206.7.7.1*
- E. Fill pipes shall be equipped with a spill container and an overfill prevention system in accordance with NFPA 30. *CFC 3404.2.11.4*
- F. Where subject to external corrosion, piping, related fluid handling components and supports for both underground and aboveground applications shall be fabricated from non-corrosive materials, and coated or provided with corrosion protection. Dissimilar metallic parts that promote galvanic action shall not be joined. *CFC 3403.6.5*

## **9. PIPING:**

Piping system shall comply with the following:

- A. Piping systems shall contain a sufficient number of manual control valves and check valves to operate the system properly and to protect the plant under both normal and emergency conditions. Piping systems in connection with pumps shall contain a sufficient number of such valves to control properly the flow of liquids in normal operation and in the event of physical damage or fire exposure. *CFC 3403.6.6*
- B. Underground piping secondary containment and under dispenser containment shall be equipped with a continuous monitoring system that either activates an audible and visual alarm, or stops the flow of product at the dispenser when a leak is detected. (23 CCR 2636 (f)(1))
- C. An approved automatic emergency shutoff valve designed to close in the event of a fire or impact shall be properly installed in the liquid supply line at the base of each dispenser supplied

by a remote pump. The valve shall be installed so that the shear groove is flush with or within ½ inch (12.7 mm) of the top of the concrete dispenser island and there is clearance provided for maintenance purposes around the valve body and operating parts. The valve shall be installed at the liquid supply line inlet of each overhead type dispenser. Where installed, a vapor return line located inside the dispenser housing shall have a shear section or approved flexible connector for the liquid supply line emergency shutoff valve to function. Emergency shutoff valves shall be installed and maintained in accordance with the manufacturer's instructions, tested at the time of initial installation and at least yearly thereafter in accordance with Section 2205.2.2. *CFC 2206.7.4*

- D. Fiberglass reinforced plastic piping need not be provided with flexible joints in locations where both of the following conditions are present:
  - i. Piping does not exceed four inches in diameter; and
  - ii. Piping has a straight run of not less than four feet on one side of the connection when such connections result in a change of direction. In lieu of the minimum four foot straight run length, approved and listed flexible joints are allowed in dispensers and suction pumps, at submerged pumps and tanks, and where vents extend aboveground. *CFC 3403.6.9.1*
- E. Pipe and tubing shall be bent in accordance with ASME B31.9. *CFC 3403.6.11*

## **10. VENTING:**

Venting systems shall comply with the following:

- A. Vent pipe outlets for tanks storing Class I, II or III-A liquids shall be located such that the vapors are released at a safe point outside of buildings and not less than 12 feet (3658 mm) above the adjacent ground level. Vapors shall be discharged upward or horizontally away from closely adjacent walls to assist in vapor dispersion. Vent outlets shall be located such that flammable vapors will not be trapped by eaves or other obstructions and shall be at least five feet (1524 mm) from building openings or lot lines of properties that can be built upon. Class III-B liquids are allowed to discharge inside a building if the vent is a normally closed vent. *CFC 3404.2.7.3.3*
- B. Vent piping shall be designed, sized, constructed and installed in accordance with Section 3403.6. Vent pipes shall be installed such that they will drain toward the tank without sags or traps in which liquid can collect. Vent pipes shall be installed in such a manner as to not be subject to physical damage or vibration. *CFC 3404.2.7.3.4*
- C. For underground tanks, manifolded vent pipes shall be sized to prevent system pressure limits from being exceeded when manifolded tanks are filled simultaneously. *CFC 3404.2.7.3.5.2*
- D. Use of flame arresters in piping systems shall be in accordance with API 2028. *CFC 3404.2.7.3.2*
- E. Tank vent piping shall not be manifolded unless required for special purposes such as vapor recovery, vapor conservation, or air pollution control. *CFC 3404.2.7.3.5*
- F. Vent piping for tanks storing Class I liquids shall not be manifolded with vent piping for tanks storing Class II or III liquids unless positive means are provided to prevent the vapors from Class I liquids from entering tanks storing Class II or III liquids to prevent contamination and possible changes in classification of the less volatile liquid. *CFC 3404.2.7.3.5.3*
- G. Tanks and pressure vessels storing Class I-B or 1-C liquids shall be equipped with venting devices which shall be normally closed except when venting under pressure or vacuum conditions, or with listed flame arrestors. The vents shall be installed and maintained in accordance with Section 4.2.5.1 of NFPA 30 or API 2000. *CFC 3404.2.7.3.6*

## **11. VAPOR RECOVERY:**

Vapor recovery systems shall comply with the following:

- A. Dispensing devices incorporating provisions for vapor recovery shall be listed and labeled. *CFC 2206.7.9.1.1*
- B. Means shall be provided to shut down fuel dispensing in the event the vapor return line becomes blocked. *CFC 2206.7.9.1.1*
- C. An acceptable method shall be provided to close off the vapor return line from dispensers when the product is not being dispensed. *CFC 2206.7.9.1.2*

- D. Nonmetallic piping shall be installed in accordance with the manufacturer's installation instructions. *CFC 2206.9.1.3*
- E. Vapor return piping shall be installed in a manner that drains back to the tank, without sags or traps in which liquid can collect. If necessary due to grade, condensate tanks are allowed in vapor return piping. Condensate tanks shall be designed and installed so that they can be drained without being opened. *CFC 2206.9.1.3*
- F. An approved shear joint shall be rigidly mounted and connected by a union in the vapor return piping at the base of each dispensing device. The shear joint shall be mounted flush with the top of the surface on which the dispenser is mounted. *CFC 2206.7.9.1.4*
- G. Flexible joints shall be listed and approved and shall be installed on underground liquid, vapor, and vent piping at the following locations:
  - i. Where piping connects to underground tanks;
  - ii. Where piping ends at pump islands and vent risers; and
  - iii. At points where differential movement in the piping can occur. *CFC 3403.6.9*
- H. Fiberglass reinforced plastic piping need not be provided with flexible joints in locations where both of the following conditions are present:
  - i. Piping does not exceed four inches in diameter; and
  - ii. Piping has a straight run of not less than four feet on one side of the connection when such connections result in a change of direction. In lieu of the minimum four foot straight run length, approved and listed flexible joints are allowed to be used under dispensers and suction pumps, at submerged pumps and tanks, and where vents extend aboveground. *CFC 3403.6.9.1*
- I. Vapor processing systems that introduce air into the underground piping or storage tanks shall be provided with equipment for prevention of flame propagation that has been tested and listed as suitable for the intended use. *CFC 2206.7.9.2.1*
- J. Vapor processing equipment shall be located at or above grade. Sources of ignition shall be located not less than 50 feet (15,240 mm) from fuel transfer areas and not less than 18 inches (457 mm) above tank fill openings and tops of dispenser islands. *CFC 2206.7.9.2.2*
- K. Vapor processing units shall be located not less than 10 feet (3,049 mm) from the nearest building or property line of a lot that can be built upon, except where the required distances to buildings, property lines, or fuel transfer areas cannot be obtained, in which case means shall be provided to protect equipment against fire exposure. Acceptable means include:
  - i. Approved protective enclosures, which extend at least 18 inches (457 mm) above the equipment, constructed of fire resistant or noncombustible materials; or
  - ii. Fire protection using an approved water spray system. *CFC 2206.7.9.2.2*
- L. Vapor processing equipment shall be located a minimum of 20 feet (6,096 mm) from dispensing devices. Processing equipment shall be protected against physical damage by guardrails, curbs, protective closures or fencing. Where approved protective enclosures are used, approved means shall be provided to ventilate the volume within the enclosure to prevent pocketing of flammable vapors. *CFC 2206.7.9.2.2*
- M. Where a down slope exists towards the location of the vapor processing unit from a fuel transfer area, the fire code official is authorized to require additional separation by distance and height. *CFC 2206.7.9.2.2*
- N. Vapor processing units shall be securely mounted on concrete, masonry, or structural steel supports on concrete or other noncombustible foundations. *CFC 2206.7.9.2.3*
- O. Vapor recovery and vapor processing equipment is allowed to be installed on roofs when approved. *CFC 2206.7.9.2.3*
- P. Nonmetallic piping, when used in vapor recovery piping, shall be installed in accordance with the manufacturer's installation instructions. *CFC 2206.7.9.1.3*
- Q. Vapor return lines shall be installed in a manner that drains back to the tank, without sags or traps in which liquid can become trapped. If necessary due to grade, condensate tanks are allowed in vapor return piping. Condensate tanks shall be designed and installed so that they can be drained without being opened. *CFC 2206.7.9.1.3*
- R. Flexible joints shall be installed in accordance with Section 3403.6.9. An approved shear joint shall be rigidly mounted and connected by a union in the vapor return piping at the base of each

dispensing device. The shear joint shall be mounted flush with the top of the surface on which the dispenser is mounted. *CFC 2206.7.9.4*

- S. An acceptable method shall be provided to close off the vapor return line from dispensers when the product is not being dispensed. *CFC 2206.7.9.1.2*
- T. Equipment in vapor processing systems, including hose nozzle valves, vapor pumps, flame arresters, fire checks or systems for prevention of flame propagation, controls and vapor processing equipment, shall be individually listed for the intended use in a specified manner. Vapor processing systems that introduce air into the underground piping or storage tanks shall be provided with equipment for prevention of flame propagation that has been tested and listed as suitable for the intended use. *CFC 2206.7.9.2.1*
- U. Electrically energized vapor recovery equipment shall be directly connected to and controlled by the emergency pump shutoff switch. *CFC 2206.7.4*

## **12. ELECTRICAL:**

- A. Electrical equipment shall be in compliance with the Electrical Code and CFC Table 3403.1.1

## **13. TESTING AND INSPECTION:**

Testing and Inspections shall comply with the following:

- A. Underground storage tank system shall be tested in accordance with nationally recognized standards. Records of all tests and the results shall be kept and made available to the SCFD inspector upon request. *CFC 3404.2.12.1*
- B. An SCFD inspector shall witness the following tests being performed on the underground tank system; call for inspection at (408) 615-4970:
  - i. Underground piping and tank installation prior to bury, and
  - ii. Final inspection of all operating systems.
- C. The following tests shall be performed and records of such tests shall be maintained at the job site and shall be provided to the SCFD inspector upon request.
  - i. The tank shall be tested for tightness at the installation site prior to installation in accordance with the manufacturer's instructions. Primary and secondary containment shall be tested at not less than 3 psig nor more than 5 psig for at least 30 minutes. In lieu of the pressure test, an equivalent differential pressure test, expressed as inches of mercury vacuum in the interstitial space for a minimum of 30 minutes is acceptable. (23 CCR 2635 (a)(3))
  - ii. Before being covered, tanks and piping connected to underground tanks shall be tested for tightness in the presence of the SCFD inspector. *CFC 3404.2.12.2*
  - iii. Unless tested in accordance with the applicable section of ASME B31.9, piping, before being covered, enclosed, or placed in use, shall be hydrostatically tested to 150 percent of the maximum anticipated pressure of the system, or pneumatically tested to 110 percent of the maximum anticipated pressure of the system, but not less than five psig (34.47 kPa) at the highest point of the system. This test shall be maintained for a sufficient time period to complete visual inspection of all joints and connections. For a minimum of ten minutes, there shall not be leakage or permanent distortion. Care shall be exercised to ensure that these pressures are not applied to vented storage tanks. Such storage tanks shall be tested independently from the piping. *CFC 3403.6.3*
  - iv. New underground tanks shall be tested for tightness hydrostatically or pneumatically at not less than three psi and not more than five psi for 30 minutes. Pneumatic testing shall not be used on a tank containing flammable or combustible liquids or vapors. *CFC 3404.2.12.1*
  - v. Devices used for final testing of tanks shall be capable of detecting leaks as small as 0.05 gallons per hour. Leaking piping and equipment shall not be used until repaired or replaced.
  - vi. Prior to placing the underground storage tank in use, the underground tank shall be shown to be leak tight by either enhanced leak detection, or by an inert gas pressure test certified by a third party and approved by the State Water Resources Control Board. (H&SC 25290.1(j))

# **SCHEDULING INSPECTIONS**

- A. Inspection appointments can only be made by the installing contractor.
- B. It is the responsibility of the installing contractor or a representative to be on the job site during the inspection with a set of approved plans. Failure to do so will result in the cancellation of the inspection and an assessment of a re-inspection fee of \$150.00 will be assessed.
- C. Call (408) 615-4970 at least one business day prior to the desired date of the inspection. Inspections are assigned on a first come first served basis. The inspection request line is open Monday through Friday between 8:00 a.m. and 5:00 p.m.

## SMART PERMIT INFORMATION SYSTEM

The City of Santa Clara offers you the opportunity to check the status of you fire permits on-line. To access the Smart Permit Information System please log onto the system at:

[http://santaclaraca.gov/community/smt\\_permit\\_information.html](http://santaclaraca.gov/community/smt_permit_information.html)

You can search the system using your Case Number (Permit number; fir2008-00001), Project Name, Applicant Name or the address of the project.



# SANTA CLARA FIRE DEPARTMENT - NOTES

## Place the following notes, verbatim, on the plans:

1. Fire department inspection required before the tank can be filled or used. Call (408) 615-4970 to schedule inspection.
2. Activation of the emergency shutdown devices shall stop the transfer of fuel to the dispensers and close all valves that supply fuel to the dispensers.
3. Emergency shutdown devices shall be distinctly labeled "EMERGENCY FUEL SHUTDOWN DEVICE".
4. The dispensing of fuel into the fuel tanks of motor vehicles or portable containers shall be under the supervision of a qualified attendant at all times, except at approved unsupervised locations.
5. Flammable and combustible liquids and petroleum waste products shall not be discharged or released to sidewalks, streets, highways, sewers, etc.
6. The attendant's primary function shall be to supervise, observe, and control the dispensing of motor fuels. The attendant shall prevent the dispensing of flammable and combustible liquids and flammable gases into containers not in compliance with code, control sources of ignition, give immediate attention to accidental spills or releases, and be prepared to use fire extinguishers. A method of communicating with the fire department shall be provided for the attendant.
7. Electrical equipment shall be in accordance with the Electrical Code.
8. Signs prohibiting smoking, prohibiting dispensing into unapproved containers, and requiring vehicle engines to be stopped during fueling shall be conspicuously posted within sight of each dispenser.
9. Weeds, grass, brush, trash, and other combustible materials shall be kept not less than ten feet from fuel storage vessels and fuel handling equipment.
10. Accurate daily inventory records shall be maintained and reconciled on underground fuel storage tanks for indication of possible leakage from tanks and piping. The records shall be kept at the premises or made available for inspection by the fire code official within 24 hours of a written or verbal request and shall include records for each product showing daily reconciliation between sales, use, receipts and inventory on hand. Where there is more than one system consisting of tanks serving separate pumps or dispensers for a product, the reconciliation shall be ascertained separately for each tank system. A consistent or accidental loss of product shall be immediately reported to the fire code official. *CFC 2206.2.1.1*

## INSTALLATION OF NEW UNDERGROUND STORAGE TANKS AT UNSUPERVISED FUEL DISPENSING STATIONS—ADDITIONAL REQUIREMENTS.

All the above requirements for supervised fuel dispensing apply as well as the following:

- A. Provide a letter signed by the owner/operator of the unsupervised dispensing station that details the following:
  - i. Hours of operation.
  - ii. The owner or operator provides, and is accountable for, daily site visits, regular equipment inspection and maintenance, conspicuously posted instructions for the safe operation of dispensing equipment, and posted telephone numbers for the owner or operators. *CFC 2204.3.1*
  - iii. Specify the location and provide a detail of the following sign on the plan; the sign shall be posted in a conspicuous location reading: *CFC 2204.3.5*

## **IN CASE OF FIRE, SPILL, OR RELEASE**

1. Use emergency pump shutoff!
  2. Report the accident to the Fire Department: 911
- This facility's address is \_\_\_\_\_

- B. Specify on the plan the location and method the user of the fuel dispensing equipment will have for transmitting a fire alarm. *CFC 2204.3.6*
- C. Dispensing equipment used at unsupervised locations shall comply with one of the following. Specify on the plan which one and provide any additional details or documentation as needed:
  - i. The amount of fuel being dispensed is limited in quantity by a preprogrammed card; or
  - ii. Dispensing devices are programmed or set to limit uninterrupted fuel delivery to 25 gallons (95 L) and require a manual action to resume continued delivery. *CFC 2204.3.7*

### **MODIFICATIONS OR UPGRADES TO EXISTING UNDERGROUND STORAGE TANKS AT SUPERVISED AND UNSUPERVISED FUEL DISPENSING STATIONS.**

- A. Provide a clear and specific scope of work on the coversheet of the plan.
- B. Provide the manufacturer's specification sheets for the new and/or replaced equipment. Sheets shall have the style, type, model, and UL listing for each piece of equipment highlighted.
- C. When existing listed or labeled dispensing devices are modified for vapor recovery, such modifications shall be listed by report by a nationally recognized testing laboratory. The listing by report shall contain a description of the component parts laboratory. The listing by report shall contain a description of the component parts used in the modification and recommended method of installation on specific dispensers. Such report shall be submitted with the modification plan. *CFC 2206.7.9.1.1*